

# MASSACHUSETTS

## Science and Engineering Profile

	Mass.	U.S.	Rank		Mass.	U.S.	Rank
Doctoral scientists, 1993	19,645	430,332	5	Total R&D performance, 1993 (millions)	\$9,468	\$161,427	4
Doctoral engineers, 1993	3,166	81,293	7	Industry R&D, 1993 (millions)	\$6,952	\$117,622	5
S&E doctorates awarded, 1993	1,491	25,409	3	Academic R&D, 1993 (millions)	\$1,076	\$19,489	5
of which, in engineering	23%	22%		of which, in life sciences	37%	55%	
in life sciences	20%	24%		in engineering	20%	16%	
in physical sciences	20%	15%		in physical sciences	16%	11%	
S&E postdoctorates, 1993				Higher education current-fund			
in doctorate-granting institutions	3,801	34,394	2	expenditures, 1993 (millions)	\$7,456	\$163,994	6
S&E graduate students, 1993				Number of SBIR awards, 1990-93	2,321	13,995	2
in doctorate-granting institutions	22,552	438,128	4	Patents issued to state residents, 1994	2,338	56,039	9
Population, 1994 (000s)	6,041	260,341	13	Gross state product, 1992 (billions)	\$162.0	\$5,994.1	10
Civilian labor force, 1994 (000s)	3,179	131,013	13	of which, agriculture	1%	2%	
Personal income per capita, 1994	\$25,616	\$21,809	5	manufacturing, mining, construction	21%	23%	
Federal spending				transportation, communication, utilities	7%	9%	
Total expenditures 1994 (millions)	\$35,374	\$1,284,896	12	wholesale and retail trade	16%	16%	
R&D obligations 1993 (millions)	\$3,552	\$65,394	3	finance, insurance, real estate	21%	18%	
				services	25%	20%	
				government	9%	12%	

Rankings and totals are based on data for the 50 States and D.C.

## Federal Obligations for Research and Development in Massachusetts by Agency and Performer: Fiscal Year 1993

[Thousands of dollars]

	Total	Federal intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank
<b>Total, all agencies</b>	3,551,660	383,885	440,973	1,506,230	681,394	525,805	13,373	3
<b>Department of Agriculture</b>	20,834	14,729	0	6	5,784	315	0	22
<b>Department of Commerce</b>	37,827	27,169	538	7,260	2,497	307	56	5
<b>Department of Defense</b>	2,168,523	257,400	372,963	1,366,769	131,213	40,035	143	5
<b>Department of Energy</b>	82,543	727	0	6,836	71,704	3,276	0	16
<b>Dept. of Health &amp; Human Services</b>	853,135	27,457	53,814	63,820	279,415	423,085	5,544	4
<b>Department of the Interior</b>	7,391	5,383	0	331	1,296	55	326	28
<b>Department of Transportation</b>	80,144	50,019	13,419	6,975	2,613	0	7,118	1
<b>Environmental Protection Agency</b>	24,701	0	0	18,489	6,026	0	186	4
<b>Nat'l Aeronautics &amp; Space Admin.</b>	132,368	549	49	26,365	49,424	55,981	0	10
<b>National Science Foundation</b>	144,194	452	190	9,379	131,422	2,751	0	3
<b>State rank</b>	3	11	3	6	5	1	5	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable

Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources.